

REMARKS

Claims 1-13 and 18-19 remain in the referenced application. Claims 10-13, 18, and 19 have been allowed. Claims 14-17, and 20-32 have been canceled. Claims 33-40 are new.

Claim 1 stands rejected under 35 U.S.C. §102 (b) by Reynolds et al. (U.S. Patent No: 3,441,176, hereinafter referred to as “Reynolds”). The Examiner asserts that Reynolds discloses “an oblong shaped housing,” that includes a carbon dioxide inlet (316), a water inlet (314), and a carbonated water outlet (350). Applicant has previously established that Reynolds discloses a carbonator (300) that includes a vessel (301) having a diameter and a length measurement (col. 12, lines 12-14). A diameter and a length measurement are clearly indicative of a “cylindrically shaped housing.” The Examiner has further provided a definition for the term “oblong.” As cited by the Examiner, the term oblong is defined as: deviating from a square, circular, or spherical form by elongation in one direction. Applicant has respectfully conducted his own research on the term “oblong,” and has concluded that many definitions exist. Illustratively, “oblong – n. a plane figure that deviates from a square or circle due to elongation.” In a second example, “oblong – 1. Having a long dimension, esp. having one of two perpendicular dimensions, as width or length, greater than the other. 2. Having the shape of or like an ellipse or rectangle.,” (Webster’s II New Riverside University Dictionary, 1988.).

Applicant respectfully contends that a circle or square lie in a plane, and may be elongated in that plane to create an “oblong,” and has provided Appendix A for clarification of terms and directions. As illustrated in Figure 1 of Appendix A, a circle lies in an x-y plane, and therefore, may be elongated in the x-direction or the y-direction, thereby forming an oblong. A square similarly lies in an x-y plane, and likewise, may be elongated in either the x-direction or the y-direction to create an oblong. Alternatively, a sphere is three dimensional, and may

therefore be extended in the x, y, or z plane, or any angle therebetween. As shown in Figure 1, a sphere is split through the y-z plane, and elongated by moving the half lying in positive x-plane in the positive x-direction. In this fashion, an “oblong” would encompass a first half of the sphere, a second half of the sphere, and all areas therebetween. Applicant respectfully contends that Reynolds’ carbonator housing includes a cylinder and one half of a sphere, as shown in Figure 2 of Appendix A. Accordingly, Reynolds discloses half of an “oblong.” Applicant further respectfully asserts that a circle is planar, and therefore, must be elongated in either the x or y direction, and not the z-direction, as shown in Figure 3 of Appendix A. A circle elongated in the z direction becomes a cylinder that retains a circular cross section, and therefore has not “deviated from a circular form,” as denoted in the Examiner’s definition of the term “oblong.” At best, Reynolds discloses “one half of an oblong,” as Reynolds has a planar floor that is substantially perpendicular to the cylindrical wall.

In view of the ambiguity of the term “oblong,” Applicant has amended claim 1 to more completely define Applicant’s invention. Applicant’s amended claim 1 now recites, “a carbonator housing having a reduced vertical profile defining an interior volume; a liquid inlet port disposed on the housing for inletting a liquid from a liquid source into the interior volume; a gas inlet port disposed on the housing for inletting gas from a gas source into the interior volume; and an exit port disposed on the housing.” Applicant, accordingly, respectfully submits that claim 1, as amended, clearly is patentable over Reynolds, because Reynolds fails to disclose a “carbonator having a reduced vertical profile.” Reynolds clearly discloses a cylindrically shaped carbonator housing as recited in column 9, lines 34-35, of Reynolds’s disclosure, “The carbonator 300 comprises a fluid-tight vessel 301 including a cylindrical side wall 302 that is closed at the upper end thereof by an outwardly dished top wall 303....” Reynolds’s fluid tight

vessel 301 is clearly of a cylindrical construction that stands on end. Applicant contends that Reynolds' housing has a height dimension greater than a width dimension, thereby creating an imposing vertical profile. Applicant further contends that Reynolds's dominant dimensions are in the vertical direction, and therefore, create an imposing vertical profile. An imposing vertical profile clearly cannot anticipate Applicant's invention of a "carbonator including a housing having a reduced vertical profile," and therefore, cannot anticipate Applicant's amended claim 1. Applicant, therefore, respectfully submits that claim 1, as amended, is patentable over Reynolds, as Reynolds fails to disclose a carbonator housing having a "reduced vertical profile." Applicant, therefore, contends that Applicant's amended claim 1 is patentable over Reynolds, and respectfully requests that the rejections for claim 1 under 35 U.S.C. §102 (b) by Reynolds be withdrawn.

Claim 2 has been rejected under 35 U.S.C. §102 (b) by Reynolds. Applicant contends that the patentability of claims 2 lies with the patentability of claim 1. Applicant has amended claim 2 to further limit Applicant's amended claim 1. Applicant's amended claim 2 now recites, "wherein a vertical dimension of a cross section of the housing is one of the shorter dimensions of the housing." Applicant respectfully contends that Reynolds discloses a housing having a vertical dimension greater than the remaining dimensions of the housing, and therefore, cannot anticipate Applicant's amended claim 2, "wherein a vertical dimension of a cross section of the housing is one of the shorter dimensions of the housing." Accordingly, applicant respectfully asserts that Applicant's amended claim 2 is patentable over Reynolds, and respectfully requests that the rejection of claim 2 under 35 U.S.C. 102 (b) be withdrawn.

Claim 3, 4, and 5 have been rejected under 35 U.S.C. §102 (b), as being anticipated by Reynolds. Applicant has amended claims 3, 4, and 5, to further limit Applicant's amended claim

2. Applicant's amended claims 3, 4, and 5, now define a shape of the cross section of the housing, including an oblong, an oval, and a semi-oblong shape. Applicant contends that Reynolds does not disclose a cross section of the housing as being either an oblong shape, an oval shape, or a semi-oblong shape. Reynolds discloses a cylinder having a cylindrical cross section, and therefore, cannot anticipate Applicant's claims 3, 4 and 5, that define the shape of the cross section of the housing as being an oblong shape, an oval shape, or a semi-oblong shape. Accordingly, Applicant respectfully contends that Applicant's amended claims 3, 4, and 5, are patentable over Reynolds, and respectfully requests that the rejections of claims 3, 4, and 5, under 35 U.S.C. §102 (b), be withdrawn.

Claims 6, 7, and 8, have been rejected under 35 U.S.C. §102 (b), as being anticipated by Reynolds. Applicant has amended claim 6, 7, and 8 to further limit Applicant's invention. Applicant's amended claims 6, 7, and 8, are now drawn to placing a carbonator into a cold plate. Applicant respectfully asserts that Reynolds does not disclose placing a carbonator into a cold plate, and therefore, cannot anticipate Applicant's amended claim 6, 7, and 8. Applicant accordingly, respectfully contends that Applicant's amended claims 6, 7, and 8, are patentable over Reynolds, and respectfully requests that the rejections of claims 6, 7, and 8, under 35 U.S.C. § 102 (b), be withdrawn.

Claim 9 has been rejected under 35 U.S.C. § 102 (b), as being anticipated by Reynolds. Applicant has amended claim 9 to further define Applicant's invention. Applicant's amended claim 9 recites, "wherein the wider cross section provides an increased exterior surface area." Applicant respectfully contends that Reynolds discloses a circular cross section, and therefore, is limited to a predetermined amount of surface area based upon a radius dimension of the circle. Applicant's invention is drawn to an oval or oblong cross section to generate an increased

exterior surface area for a given height. Illustratively, commonly utilized pipe is round, thereby locking all cylindrical carbonators into a predetermined surface area to height relationship. In this arrangement, a length dimension must be extended to create additional exterior surface area. Applicant's invention is drawn to a carbonator housing having a reduced height, wherein a width dimension of a cross section may be infinitely expanded to capture increased exterior surface area. Applicant contends that Reynolds is locked into a predetermined amount of surface area, as Reynolds utilizes a cylindrical housing. Reynolds does not disclose a wider cross section housing, and therefore, cannot anticipate Applicant's amended claim 9. Accordingly, Applicant respectfully asserts that Applicant's amended claim 9 is patentable over Reynolds, and respectfully requests that the rejection under 35 U.S.C. § 102 (b), be withdrawn.

Applicant has further added claims 33 through 40, and further submits that claims 33-40 are patentable over Reynolds. Claim 33 is drawn to a carbonator housing including a cross section having a width dimension that is greater than a height dimension of the cross section. As previously argued, Reynolds does not disclose a carbonator housing having a cross section including a width dimension that is greater than the height dimension. Reynolds clearly discloses an upright carbonator that includes a circular cross section having a width and a height dimension that are equivalent to the diameter of the circular cross section. If the cross section is taken along the axis of Reynolds' cylinder, then the height dimension of the cross section is substantially greater than the width of the cross section. Accordingly, Applicant contends that claims 33 through 40 are patentable over Reynolds.

The prior art made of record has been reviewed by Applicant and is deemed not to anticipate nor render obvious the claimed invention.

In view of the foregoing, Applicant respectfully requests reconsideration of the rejected claims, and solicits early allowance of the subject application.

Respectfully submitted,

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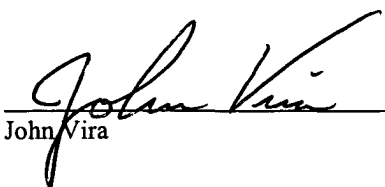
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